



**Politecnico  
di Torino**

**ScuDo**  
Scuola di Dottorato ~ Doctoral School  
WHAT YOU ARE, TAKES YOU FAR

Doctoral Dissertation  
Doctoral Program in Urban and Regional Development (33<sup>rd</sup> Cycle)

**Back to the roots of socially  
constructed disaster risk  
Revisioning and envisioning disaster aid and  
governance**

By

**Giacomo Cazzola**

**Supervisor:**

Prof. Maurizio Tiepolo

Politecnico di Torino

2021

## **Abstract**

This thesis reflects on the acknowledgement and usage, for disaster aid and governance, of the Disaster Risk Creation (DRC) theoretical construct and investigates the barriers and challenges of addressing the processes enhancing exposure and vulnerability. The methodological approach adopted builds upon well-established Disaster Risk (DR) root causes analytical models and questions their relevance and urgency for aid and Disaster Risk Management (DRM) actors in Haiti and Guatemala, two highly exposed and vulnerable Countries. Recollecting aid workers' tales and explanations of DRC restated the overall paralysis in dealing with "usual" clusters of DR drivers, particularly dysfunctional governments, hazard-prone buildings, and environmental degradation. Besides this awareness, actors revealed a certain degree of self-consciousness also of the side effects of their practices, of their active role in unwittingly reinforcing and amplifying disaster risk: this through and due to lack of common long-term strategies and coordination, conflicting prioritizations and interventions, duplicated and counterproductive services, failed and ineffective recoveries, etc. Stated DRM and aid's contribution to DRC, the thesis intercepts relevant academic frameworks that already captured some explanations to such dynamics and open to theoretical and practical implications that could reverse such vicious tendencies and resist to new creations of DR.

# Contents

1. Introductory notes.....	1
2. Disaster risk creation: addressing the right problem and setting an appropriate analytical tool .....	7
2.1 Introduction.....	7
2.2 Vulnerability-enhancing and disaster-forcing urban attributes.....	9
2.3 A systems' dynamics-oriented disaster risk analysis .....	14
Hybrid and hyper risks: complex, interconnected and interdependent .....	15
Interconnected and socially constructed disaster risk .....	17
The interplay between physical and social processes: patterns, feedbacks, nonlinear dynamics, and puzzles.....	18
2.4 Disaster Risk Management's shortcomings and political reluctance on Disaster Risk Creation.....	19
2.5 The Pressure and Release model and disaster risk root cause analysis frameworks.....	21
2.5.1 The Pressure and Release model.....	22
2.5.2 Vulnerability's dimensions .....	26
2.5.3 Disaster Root Causes – “Detectives” and “Forensics” .....	29
2.5.4 What to seek, what to avoid: prospective DRM and marginalization.....	31
2.6 Conclusive remarks.....	35
3. Research design and methodology .....	37
3.1 Research questions, hypotheses, and objectives .....	38
3.2 Setting a common ground: glossary, analytical lens and case study.....	41
3.3 Geographical settings.....	44
3.4 Case study and unit of analysis.....	46
3.4.1 Host and entry point to the arena: COOPI .....	48

How did the data collection go?.....	49
3.5 Data collection and processing .....	51
3.6 Research's challenges and biases.....	54
4. The Haitian experience: understanding and framing the Disaster Risk Creation debate .....	57
4.1 Introduction.....	57
An overview of Haitian DR .....	59
4.2 Framing DRC's dimensions in Haiti.....	64
Data sourcing: perspectives and existing contributions on DRC processes.....	64
4.2.1 Root and underlying causes .....	68
4.2.2 Political and institutional dimension.....	72
4.2.3 Environmental dimension .....	76
4.2.4 Physical and technical dimension .....	78
4.2.5 DRC environmental effects and contribution to hazards .....	80
4.2.6 Decades of catastrophes, relief, and aftershocks.....	83
4.2.7 Everlasting humanitarian crisis status.....	92
4.3 Conclusion: Coordination, justice, and reparations .....	96
5. The Guatemalan experience: understanding and framing the Disaster Risk Creation debate	101
5.1 Introduction.....	101
An overview of Guatemala DR.....	103
5.2 Framing DRC's dimensions in Guatemala .....	107
Data sourcing: perspectives and existing contributions on DRC processes....	107
5.2.1 Roots of vulnerabilities: a story of dispossession and marginalization ..	110
5.2.2 DRC drivers and pressures: imposed structural adjustments VS survival strategies.....	116
5.2.3 Institutional and political drivers and unsafe conditions.....	120
5.2.4 Environmental dimension: resource capture, scarcity, and degradation .	122
5.2.5 Physical and technical dimension of vulnerability.....	129
5.2.6 Aid, Planning and DRM dimension.....	137

5.3 Conclusions.....	143
6. Resisting Disaster Risk Creation: challenges and implications for aid and Disaster Risk Management.....	147
6.1 Introduction.....	147
6.1.1 The disaster risk forcing taboos .....	149
6.2 Implications for the DRC analytical framework: a new layer .....	152
6.2.1 Framing results: contributions from the academia and the international agenda .....	155
6.3 Theoretical implications.....	166
6.4 Practical implications for a resistance to DRC .....	169
6.4.1 A country-level, shared, updated DRC analysis .....	169
6.4.2 DRC-oriented initiatives mapping and coordination matrix .....	170
6.4.3 Extractivism out of the blind spot: framing disaster justice.....	175
7. Conclusions .....	177
8. References .....	183